DOCUMENT RESUME

ED 161 388 HE 010 622

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TITLE Report on a Pilot Project in Performance Funding. AIR Forum Paper 1978.
PUB DATE May 78
NOTE 35p.; Paper presented at the annual Association for Institutional Research Forum (18th, Houston, Texas, May 21-25, 1978)

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS Case Studies; *Community Colleges; *Educational Accountability; *Educational Assessment; Educational Objectives; Evaluation Criteria; Higher Education; Institutional Research; *Instructional Improvement; *Performance; Pilot Projects; Program Development; Resource Allocations; *State Aid; State Programs; State Universities
IDENTIFIERS Performance Funding Project; *Tennessee Higher Education Commission; *Tennessee Technological University

ABSTRACT

Reported are the execution and outcomes of the Tennessee Higher Education Commission (THEC) Performance Funding Project at Tennessee Technological University, a pilot project seeking to explore the question of whether it is desirable and possible to allocate state funds to community colleges and universities on a performance effectiveness criterion (how good) as compared to the current credit hour and enrollment criteria (how much). The University project is part of a larger state-wide effort sponsored by the THEC and funded by grants from several sources. This case study presentation is organized according to the following topics: First, the background for the state-level project is discussed as part of the national trend of concern about accountability. Second, the rationale for and objectives of the state-level project are considered. Third, the experiences at Tennessee Technological University are presented, with attention to the participants and to the events and procedures involved in its execution. The first year was dedicated to the development of instructional goals and performance indicators; the second year, with the acquisition of data on these indicators and the development of ways in which performance might be incorporated into the funding project. Positive outcomes are cited and some explanations for the relative degree of success to date are offered. Attention is also given to remaining challenges and problems. (Author/JMD)

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ED161388

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# REPORT ON A PILOT PROJECT IN PERFORMANCE FUNDING*

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Presented at the Eighteenth Annual Forum of the Association for Institutional Research, May 21 - 25, 1978, Houston, Texas.

*Although many individuals have contributed either directly or indirectly to the execution of the pilot project effort discussed in this paper, special thanks are due President Arliss L. Roaden, Vice President Wallace S. Prescott and Associate Vice President Donald C. Caplenor of Tennessee Technological University, and to Dr. E. Grady Bogue and Mr. William E. Troutt of the Tennessee Higher Education Commission. The continuing encouragement, support and assistance of these individuals has been indispensable to the realization of project objectives.

# REPORT ON A PILOT PROJECT IN PERFORMANCE FUNDING

(ABSTRACT)

This paper is a report on the execution and outcomes of the THEC Performance Funding Project at Tennessee Technological University, a pilot project conducted during the years 1976-77 and 1977-78. The University project, which is still in progress, is part of a larger state-wide effort sponsored by the Tennessee Higher Education Commission (THEC) and funded by grants from the Fund for the Improvement of Postsecondary Education, the W.K. Kellogg Foundation, the Ford Foundation, and an anonymous donor.

The paper is intended as a report on a case study and it is organized according to the following topics: First, the background for the state-level project is discussed as part of the national trend of increasing concerns about accountability. Second, the rationale for and objectives of the state-level project are considered. Third, the experiences with the pilot project at Tennessee Technological University are presented, with attention to the participants and to the events and procedures involved in its execution. Positive project outcomes are cited and some attempt is made to explain the reasons for the relative degree of success enjoyed to date. Attention is also afforded to remaining challenges and problems.

REPORT ON A PILOT PROJECT IN PERFORMANCE FUNDING

An important correlate of the growing concern about and emphasis upon public accountability is the increasing attention being afforded to performance funding by a variety of interested parties, including state legislatures and executive offices, state-wide coordinating agencies and governing boards, and institutions of and professionals within public higher education. A lucid summation of major state-level experiences with "performance budgeting," "performance audits," and "program reviews," together with a clarification of select conceptual, operational and political issues, appears in a recent publication edited by John K. Folger (1977); and it warrants the attention of all those with a serious interest in performance funding.

The present paper is a report on the execution and outcomes of the THEC Performance Funding Project at Tennessee Technological University, a pilot project conducted during the years 1976-77 and 1977-78. The University project, which is still in progress, is part of a larger state-wide effort sponsored by the Tennessee Higher Education Commission (THEC) and funded by grants from the Fund for the Improvement of Postsecondary Education (FIPSE), the W.K. Kellogg Foundation, the Ford Foundation, and an anonymous donor.

The paper is intended as a report on a case study and it is organized according to the following topics: First, the background for the state-level project is discussed as part of the national trend of increasing concerns about accountability. Second, the rationale for and objectives of the state-level project are considered. Third, the experiences with the pilot project at Tennessee Technological University are presented, with attention to the participants and the events and procedures involved in its execution. H. Bradley Sagen's (1972) framework, which outlines the conditions relevant to the

adoption of educational innovations, is employed to identify major reasons for the relative success that the project has enjoyed to date. Questions which have yet to be answered and problems which remain to be solved are also identified.

The observations and interpretations advanced in this paper are the sole responsibility of the author and they do not necessarily reflect the perceptions, understandings and judgments of either the Administration or Faculty at Tennessee Technological University. Neither should the plans, policies and activities of the University's governing board (The State University and Community College System of Tennessee's State Board of Regents), nor those of the Tennessee Higher Education Commission be considered as authoritatively reported herein. Rather, it should be understood clearly that the author is reporting upon the experiences, knowledge and understandings which occurred and accrued as a concomitant of his performance in the role of Pilot Project Director at the University. That role brought him into functional relationships with the Staff of THEC, the State Board of Regents' Project Liaison Representative, the Directors of pilot projects being conducted at other institutions, and the administrators, faculty and students of the University. The validity, reliability, generalizability, and potential utility of the observations and interpretations of this report are therefore in large part a function of the organizational context surrounding the role of the Pilot Project Director. Clearly, access to the "data" of this study in the form of "conditions," "orientations" and "actions" (Babbie, 1975) has been circumscribed or limited to those available to the Pilot Project Director in the course of executing the responsibilities of his position. To the extent that the data reported here may be interpreted as resulting from a deliberate research effort, then the strategy employed would be labeled most appropriately as that of participant observation or field research, with the researcher assuming the role of "complete

participant" (Gold, 1969).

Background

The recent and increasing concern with public accountability of higher education in the United States is undeniable (Bowen, 1974a; Folger, 1977). This concern becomes evident in the policy and procedural plans and actions of legislative bodies and executive offices and their agencies; and among its more concrete and important manifestations are the resultant guidelines and regulations regarding the allocation to and expenditure of public funds by institutions of higher education.

As has been frequently suggested, pressures for increasing the public accountability of higher education have come about primarily because we have entered a period of our history in which we are witnessing the simultaneous convergence of several determining master trends, including among the more important: (1) escalating costs spurred by an inflationary economy; (2) declining rates of enrollment growth (or enrollment decline), in large part a function of a long-term post World War II secular decline in the national fertility rate; and (3) waning public confidence in higher education, a concomitant of the more general public sense of a "malaise" affecting public institutions, which has become a signal fact of the "Post-Watergate Era."

The cry for increasing public accountability raised by interested publics and elected officials has been heard within the higher education community. At the national level, some of the more significant responses have included the creation and work of associations with a nationwide scope and perspective, focusing expert attention and substantial resources upon broad questions of philosophy and policy, such as the Carnegie Commission on Higher Education (1974); the establishment of a National Center for Higher Education Management Systems (NCHEMS), which is developing a technology to allow the practical-procedural

implementation of emerging philosophies and policies; the increasing attention on the part of national testing organizations, such as the American College Testing Program (ACT) and the Educational Testing Service (ETS) with "competency-based" and "outputs-oriented" assessment instruments (e.g., the College Outcome Measures Project of ACT and the Undergraduate Assessment Program Area Tests of ETS); and the evidence of systematic and scholarly emphasis upon both policy and implementation problems and issues at the annual meetings of professional societies, such as those of the American Association of Higher Education (AAHE) and the Association for Institutional Research (AIR).

At the state level, related and parallel developments include the establishment of state-wide coordinating agencies, such as the Tennessee Higher Education Commission, and the implementation and refinement of "funding formulas" for the rational allocation of public funds to higher education.

As is true with most other controversial and politically-sensitive issues, the concern with accountability has been accompanied by the emergence of self-interested and emotion-laden perspectives and notions, which have become obstacles to rational discussion, understanding and action (Sibley, 1974). Faculty "academic freedom" is threatened by pressures for increasing "faculty productivity;" the "functional autonomy" of individual institutions is threatened by the need for "state-level coordination and control;" and the prerogatives and mandates of state-wide coordinating agencies and governing boards are constrained by the frequently incompatible demands and pressures of institutions of higher education on the one hand and those of elected officials on the other. The result is a series of tensions existing both within and between authority levels, resulting in actual or potential conflict situations, the ultimate resolutions of which promise to affect profoundly the future direction(s) of higher education in the United States as well as the cherished societal values upon which it is based, such as those of freedom, democracy, individualism, rational-

ity, practicality, efficiency, and effectiveness.

Recently, interested scholars have raised questions and addressed issues in a manner which promises to enhance rationality by reducing the ambiguity and potentials for confusion at both the theoretical-conceptual and empirical-operational levels. For example, seminal discussions explicating the concept of 'accountability' and emphasizing its multidimensionality have been advanced by Sibley (1974) and Bowen (1974b); while several excellent summaries and suggestions relating to implementation and measurement have also appeared recently (Astin, 1974; Balderston, 1974; Micek and Wallhaus, 1973; Anderson, et. al., 1973; Lumsden, 1974; and Dressel, 1972). Some "Concluding Comments" to a recent compilation of essays edited by Howard R. Bowen (1974a) captures the essence of the meaning and issues raised by the notion of 'accountability,':

> Accountability refers to the obligation of institutions and their members to produce outcomes that are consistent with the goals of the institutions and that are demonstrably worth what they cost. The idea of accountability as applied to higher education raises a host of difficult questions: How and by whom are the goals of an institution to be determined? How and by whom are the outcomes to be identified and measured? How are the costs to be allocated among particular outcomes? And how are outcomes and costs to be compared? (Bowen, 1974a, p. 119).

## The Performance Funding Project

The Performance Funding Project represents one attempt in one state to grapple with some of the central questions related to accountability. The project has been made possible by grants from FIPSE, the W.K. Kellogg Foundation, the Ford Foundation, and an anonymous donor; and it is sponsored by the Tennessee Higher Education Commission, a state-wide coordinating body created by a legis-

lative act in 1967, with a charge to "...study the use of public funds for higher education and develop policies and formulas for the equitable distribution of these funds." With regard to the distribution of funds, the position of THEC has been that, "The formula will be continually evaluated by THEC and the institutions to develop more equitable ways of distributing State dollars." (THEC, 1978). Furthermore, and as is generally true throughout the United States:

> The formula process (in Tennessee) concentrates on allocation of the same amounts to all institutions for conducting the same types of activities, but does not evaluate the quality of those activities. It measures costs and needs for funds at the individual program level, but it does not measure the quality of those offerings or the outcome of each program. (THEC, 1978).

In short, the formula currently in use in the State of Tennessee is very similar to those employed by other state-wide systems in basing allocations to public institutions primarily upon an FTE or enrollment-driven, unit-cost model, which is "inputs" or "process" rather than "outputs" or "products" focused.

It is in appreciation of the need for a more appropriate response to the demands of accountability and in simultaneous recognition of the limitations of the enrollment-driven formula that the Performance Funding Project finds its stimulus and rationale:

> Fundamentally, the Performance Funding Project was conceived as a venture in the improvement of the formula and appropriations process. <u>The purpose of the project is to explore the question of whether it might be desirable and possible to allocate some portion of state funds to community colleges and universities on a performance effectiveness criterion (how good) as compared to the current credit hour and enrollment criteria (how much)</u> (Bogue, Harris, and Troutt, 1976, pp. 1-2).

To replace or develop a substitute for the current formula is not a goal of the project, for it is realized that the "philosophical and practical" problems involved in the pursuit of such an end would be so formidable as to invite certain failure. Furthermore, it is recognized that the current formula is not without strengths or virtues, prominent among which are those of "objectivity, equity, and simplicity." Therefore, the publicly articulated position of THEC has been stated as follows:

> To completely revise the current appropriations formula...is not the purpose of the project. Thus, the project anticipates that major funds would still be allocated on the basis of enrollments by program field and level. However, the project is designed to explore the merit of building a complementary feature into the formula, a feature in which some portion of funds might be allocated on a performance basis rather than an enrollment basis. (Bogue, Harris, and Troutt, 1976, p. 2).

Additional clarification of the desired outcomes of the Performance Funding Project is made possible by a consideration of certain "boundary conditions" that any suggested revision in current funding policy must satisfy. Any such changes in the allocations formula must:

> (1) Be politically acceptable, easily understood and accepted by legislators and members of state government;
>
> (2) Be professionally acceptable, striking the right balance between the need for institutional autonomy and the need for state-level review;
>
> (3) Encourage institutions to exercise initiative in developing performance measures on which they might eventually be funded; and
>
> (4) Recognize differences in institutional role and environment

and promote diversity. (Bogue and Troutt, 1977a, p. 4).

The execution of the Performance Funding Project in the State of Tennessee has involved several significant activities and accomplishments, including the establishment and work of a National Advisory Panel and a Statewide Advisory Committee of participating governing boards, institutions, legislators and officials; visits by Project Staff to the public institutions in the State; the use of external consultants; a survey of other states' activities, staff visits to centers of other related activities (e.g., NCHEMS); and the successful pursuit of funding support, to cite some of the more significant. (Bogue, Harris, and Troutt, 1976, pp. 3-4).

Of the several completed and anticipated project activities, however, it is likely that the most significant and potentially most critical to the degree of success achieved are the "pilot projects" being conducted at eleven selected institutions of higher education from throughout the state (Bogue and Troutt, 1977a).

An important justification for the pilot phase of the Performance Funding Project is captured by the motto "Acting on the Possible While Awaiting Perfection." An explication of that motto may be derived from the following explicit assumptions:

(1) Conventional notions of academic program quality and effectiveness have been based on measures that are input and process dominated...

(2) There is both professional incentive and external interest... for more serious effort in the area of performance appraisal...

(3) Reasonably objective performance measures are available or can be developed to permit some assessment of program performance, and even though some of the measures can be considered imperfect and primitive, they offer the possibility of learning more about

impact of our effort than asking no questions at all.

(4) The philosophical and technical difficulties associated with using such imperfect measures have thus far precluded a serious breakthrough in educational performance appraisal in higher education...

(5) These criticisms leave higher education with the choice of 'no measures' of performance versus 'imperfect measures.' To expend millions of dollars on higher education and say that we have 'no measures' of performance is a risky position to take. Even imperfect measures, wisely chosen, may operationally improve, the allocation process.

(6) Further progress in the development of performance measures and educational performance appraisal is not likely to emerge from continued rehearsal of the aforementioned difficulties. Understanding and progress may have to come from harnessing deliberation to 'doing.'

(7) The presence and promise of significant funding incentive will serve to mobilize the imagination and intelligence of the Tennessee higher education community in attempting pilot projects in the area of performance appraisal and funding.

(8) The experience of such pilot projects may provide useful understandings about the potential for allocating state funds on a performance criterion and the impact of such allocation in promoting and rewarding improvements in performance. (Bogue and Troutt, 1977a, pp. 4-8).

The major objectives of each of the eleven pilot projects are as follows:

First Year

1976-1977. The first year of these pilot projects is dedicated

to the development and/or identification of instructional goals and associated performance indicators.

Second Year

1977-1978. The second year calls for the acquisition of data on these indicators and the development of ways in which performance might be incorporated into the funding project. (THEC, 1976).

Two aspects relating to the objectives of the Pilot Projects may require some additional clarification: First, it should be noted that the focus is on instructional goals only. Although it is recognized that the missions of most universities entail a commitment to research and public service, as well as to instruction, "...time and resources suggest that our principal attention be directed to instruction." Second, it is important to recognize that the concern is with institution-wide instructional goals, rather than with the instructional goals of particular programs, departments, or colleges. "While this is a more 'global' level of emphasis and difficult to assess,...we believe that careful work at the institutional level may have useful spinoff benefits for assessment and internal reward at the program level." (THEC, 1976).

Each of the eleven participating institutions formalized their involvement and commitments by virtue of "performance contracts" entered into with THEC, one for each of the project years. These contracts itemized institutional obligations to identify/develop goals and associated performance indicators, provide evidence of representative faculty involvement in developing goals and indicators, gather and report data on indicators, and the like. In return for institutional fulfillment of contractual obligations, grant monies in relatively modest amounts (e.g., Tennessee Technological University received a two-year total of $32,000 for its efforts) were made available from THEC to help support the pilot projects.

The balance of this paper is devoted to a description of the participants,

events, and procedures involved in the execution of the pilot project at Tennessee Technological University. A chronologically organized summary of the project's execution is followed by a presentation of certain tentative generalizations regarding the degree of success attained by the project to date.

## The Pilot Project at Tennessee Technological University[1]

The institutional commitment to participate in the Performance Funding Project was authorized by the President of the University and formalized by the aforementioned "performance contract," an agreement with THEC having the approval of the University's governing board (the State Board of Regents) and the Tennessee Department of Finance and Administration (Dumont, 1977a). Administrative responsibility for the project was assumed by the Vice President for Academic Affairs.

Project implementation began with the appointment of a Director. The Vice President invited a member of the faculty to assume that role, the Chairman of the Department of Sociology and Philosophy. Ostensibly, part of the reason for that choice was that faculty member's prior experience with institutional research at another institution, including work in organizing faculty involvement in objectives-based planning, identification and operationalization of program evaluation criteria, working familiarity with NCHEMS' products, and the like.

In accord with project guidelines, the Director was concerned with assuring representative faculty participation and maximum feasible faculty involvement in the pilot effort. That commitment should be evident in the following chronological outline of the principal activities of the two project years:

### First Year (1976-1977)[2]

DEVELOPING THE GOALS AND INDICATORS

March - April: Selection of Faculty Associates for the Project.

The "Faculty Associates," who continue to advise and assist the Director in

any and all matters pertaining to the project, were selected deliberately so as to be as representative as possible of the University Faculty. To that end, and in keeping with the objectives of the project, which focus upon institution-wide instructional goals, college and departmental credit hour production figures for the 1976 Fall Quarter were utilized in selecting twelve academic departments in accord with the proportionate credit hour distribution. Having identified departments, the Director subsequently consulted with several colleagues, including the Chairman of the University's Faculty Committee on the Evaluation and Improvement of Instruction, for the purpose of identifying faculty within the designated departments known to have an especially strong interest in and commitment to instructional excellence. In this manner, the five colleges and twelve separate departments were represented, thereby providing strong assurances of a broad range of faculty perspectives and interests.

May - June: Development of a Set of Institution-Wide Instructional Goals by the Faculty Associates.

Each Faculty Associate was requested to prepare a list of what constituted in his or her opinion a relevant set of institution-wide instructional goals for the University. The pertinent question they were asked to consider in developing their goal sets was, "What attributes or characteristics would we like to help develop in all or most of our students, regardless of the student's major or College?" Several of the Faculty Associates admitted that they found this to be a most challenging question, particularly since they had grown accustomed to thinking almost exclusively in terms of the goals or outcomes of their particular programs, departments and colleges.

The Faculty Associates were advised to rely upon whatever resources they thought appropriate in identifying and articulating their goals and goal sets, including their own experiences as members of the University community. It was suggested that they might find it particularly fruitful to "pick the brains" of

colleagues in their several departments and colleges. Additionally, they were provided with four basic and common references: (a) A copy of Chapter 1, "Purpose," of the University's 1973-74 Institutional Self-Study Report, which had been prepared for the Southern Association of Colleges and Schools; (b) A copy of a discussion paper sponsored by THEC entitled, The Competent College Student: An Essay on the Objectives and Quality of Higher Education (1977); (c) Copies of "Appendix A" and "Appendix B" from Benjamin S. Bloom's Taxonomy of Educational Objectives (1956), representing the "Affective" and "Cognitive" domains, respectively; and (d) A copy of a list of institutional goals and associated performance indicators for a hypothetical college, which was cited in a recent THEC publication entitled, Case Studies in Performance Funding (1977).

Of the reference materials provided, the THEC discussion paper, The Competent College Student, which was written by four prominent and distinguished Tennessee educators, was clearly the most useful, since the Faculty Associates were unanimous in their endorsement of it.

After considerable discussion and thorough review of available materials, a composite set of thirty-one institution-wide instructional goals emerged (Dumont, 1977).

June - August: Campus-Wide Faculty Survey of Instructional Goals.

In the interest of maximum feasible faculty involvement, it was decided that all members of the University faculty ought to be afforded the opportunity to give their reactions to the composite goal set prepared by the Faculty Associates. Accordingly, a campus-wide faculty survey of instructional goals was conducted utilizing a paper and pencil questionnaire having the same "Is" - "Should Be" response format as the Educational Testing Service's Institutional Goals Inventory (Peterson, 1970, 1971a, 1971b).

A full eighty percent of the faculty participated in the survey, which represents a very acceptable level of response, particularly during the summer

months. Analysis of the data revealed general faculty endorsement of the goals identified as legitimate by the Faculty Associates. The results of the survey are discussed in detail in a report entitled, Instructional Goals Survey: THEC Performance Funding Project (Dumont, 1977), which has been distributed to each and every member of the University faculty.

September - October: Identification of Performance Indicators

The development of appropriate performance indicators represented one of the major challenges of the project, perhaps the major challenge. The Faculty Associates spent many hours in many meetings discussing and debating the appropriateness and validity of a wide variety of possible indicators for the instructional goals. It is the opinion of the Project Director that a major reason for the difficulty in reaching agreement about indicators was the problem that many of the Faculty Associates had in recognizing and accepting the phenomena of indeterminacy and problematic validity which appear to be almost inevitable accompaniments of the instructional goals - outcomes assessment process.

Despite the difficulties involved, a set of indicators was developed. In so far as practicable, three classes or categories of indicators were identified for each instructional goal:

(a) More or less "objective," readily available, and "hard" pre-existing data on institutional activity which may be justified in terms of its contribution to goal attainment. For example, among the indicators associated with the goal to "develop effective writing abilities," are: Student performances on the University's English Qualifying Exam (EQE); Student utilization of the English Laboratory for remedial work; and Student enrollments, performances and evaluation of Honors courses.

(b) One or more extra-institutional standardized tests intended

as partial measures of goal attainment. Once again, found among the indicators for the goal cited under (a) above are: ACT scores of a sample of seniors as compared with those at entry; and Performances of a student sample on ACT's COMP (College Outcome Measures Project).

(c) Student and alumni reported satisfaction with personal goal attainment as determined by sample surveys.

In selecting among available extra-institutional standardized tests, considerations of cost and feasibility of administration were paramount. Since the concern was with measuring the degree of attainment of thirty-one different goals, it was recognized that it would not be feasible to select for each of the thirty-one the best (most appropriate, valid, and reliable), single and self-contained assessment instrument. Such an approach would prove prohibitively costly and tax the patience and good-will of otherwise potentially interested and cooperative students by requiring days or even a full week of testing.

In this regard, a special word needs to be said about the decision to adopt ACT's COMP (Forrest, 1977; Forrest and Steele, 1977). Not only does that battery allow direct assessment of nine of the identified goals and indirect assessment of eleven others, there are additional more or less compelling justifications for its use. Although the COMP program is still in its developmental stages, so that definitive evidence concerning matters of reliability and validity are not yet available, it was viewed as having the following two principal advantages:

(a) It is intended to assess general educational outcomes, that is, the ability to apply knowledge gained from a potentially wide variety of courses and college and university experiences. This feature is in contrast to most other assessment approaches, which focus more closely on the outcomes of particular programs or courses; and it makes the COMP program

particularly desirable as providing a set of indicators for the "institution-wide" instructional goals of this project.

(b) A second impressive and distinguishing characteristic of the COMP program is in its use of stimulus or testing materials which are not restricted to the traditional paper and pencil tests. In particular, "real life" experiences, such as T.V. documentaries, radio broadcasts, taped interviews, and the like are employed to elicit and/or record student responses.

In any event, and despite the fact that questions of validity and reliability remain moot at the time of this writing, there was excitement and optimism about the assessment and learning potentials of the COMP program. There was a similar conviction that some useful if imperfect and incomplete information and indication of goal attainment would be provided by each of the other indicators.[3]

Second Year (1977-1978)

GATHERING DATA ON INDICATORS AND CONSIDERING WAYS OF INCORPORATING PERFORMANCE INTO THE APPROPRIATIONS-ALLOCATIONS PROCESS

November - December: Planning for the Data-Gathering Effort

The second project year began with the development of plans for the data-gathering effort by the Faculty Associates and Project Director. A decision was made to gather data on but 14 of the 31 goals developed in the first project year. Reluctantly, it was determined that available time and resources would simply not allow for an adequate and satisfying data-gathering effort regarding the indicators for all 31 of the goals identified as important by the University Faculty. Assessment was therefore focused upon "essential skills" (writing, reading, speaking, mathematical), "basic understandings" (history, social sciences, science and technology, literature), "special attributes" (critical thinking and acquaintance with major methods of inquiry), as well as certain

aspects of students' experiences with their major field. (Dumont, 1978).

An important aspect of the planning phase involved securing the services of "faculty experts" for the coordination of the data-gathering tasks. Specifically, a demographer agreed to perform the task of gathering and analyzing the "preexisting data on institutional activity;" a psychologist assumed the responsibility for the administration of "extra-institutional standardized tests;" and a department chairman from the College of Education agreed to coordinate the "student and alumni reported satisfaction" surveys. Faculty were also identified and provided with orientation to serve as raters for ACT's COMP.

January - February: Increasing Faculty and Student Awareness of Project Activities

Although the objectives and activities of the project were well-publicized from the outset, through the media of community and university newspapers and local radio and television and through the dissemination of written materials and progress reports to the faculty by the Director and Faculty Associates, a concerted effort was made in the two months preceding the major data-gathering efforts to heighten student awareness and to allow open forums for discussion of issues. Of these activities, perhaps the most significant were two open meetings held to which all interested faculty and student leaders were invited. At the first of these, the Performance Funding Project Director from THEC spoke and responded to pointed questions from administrators and faculty. A second open meeting consisted of a formal presentation and discussion about ACT's COMP, directed by a faculty coordinator from one of COMP's pilot institutions. At both of these meetings, controversial and difficult questions centering primarily on issues of focal concern to faculty (e.g., academic freedom and institutional autonomy) were discussed openly and candidly.

March - April: Data-Gathering and Analysis

Intensive data-gathering and analysis regarding each of the major classes

of indicators occurred in March and April: Preexisting data on institutional activity were secured and organized with the cooperation of several administrative and academic offices and departments. The ACT battery and the COMP were administered to a stratified random sample of 100 seniors. Substantial surveys of graduating seniors and recent alumni were conducted for the purpose of eliciting reported satisfaction and related information. At the time of this writing, the analysis and interpretation of all project data remains incomplete.

June - July: Analysis and Interpretation of Data on Performance Indicators and Consideration of Ways of Incorporating Performance into the Appropriations-Allocations Process

Planned activities for the concluding two months of the second project year include completion of data analysis and interpretation and consideration of alternatives for incorporating a performance-linked feature into the appropriations-allocations process. Although it is not possible at the time of this writing to predict with confidence the precise form which the suggested funding modification might assume (either that which will be suggested by the participants of this pilot effort to THEC or that which might ultimately be proposed to the legislature by THEC), experiences of the past two years (both at the state-wide and local campus levels) appear to have narrowed the options significantly.

With regard to performance funding, the state-wide project appears to have been initiated on the basis of two fundamental and inter-related assumptions: (1) that dollars flowing to institutions would somehow be linked to institutional values obtained on performance indicators; and (2) that dollars would flow as a reward for performance only after successful performance (quality) had been demonstrated. The commitment to these two assumptions has become increasingly tenuous over the project period, and, although there are several specific varieties of arguments against these assumptions, most of them revolve around the significant obstacle of institutional resistance to inter-institutional compar-

isons of values on common or similar indicators.

That the assumptions are questionable and that they have been questioned seriously has become increasingly evident to interested observers. Indeed, concerns expressed by institutional pilot project directors, faculty and administrators have evidently been significant in inducing THEC Staff to include the following as the first three of eight "Lessons Learned" in a recent Status Report (Bogue and Troutt, 1977):

> Lesson #1. Performance Funding is a difficult concept to communicate. It has been misinterpreted in a variety of ways. The idea behind performance funding is to allocate funds after an institution makes an investment and provides data on instructional performance. This idea has often been twisted to mean advanced funding of innovative instructional approaches or a grant pool to support special instructional developments.
>
> Lesson #2. If the Performance Funding concept is not misinterpreted...then a second lesson follows. That lesson is that campus personnel are concerned about a 'rich-get-richer' and 'poor-get-poorer' possibility -- the idea that the 'big' campus already rich in resources will win out over the 'smaller' campus in any performance competition...
>
> Lesson #3. The possibility of statewide indicators of institutional performance is an anathema to campus personnel. Early in the project the possibility of developing a set of statewide indicators that all institutions could be assessed against was discussed. One campus administrator pointed out...that statewide indicators of performance 'average out' institutional identity just as the current formula supposedly does, since every institution would be assessed by a common standard. (Bogue and Troutt,

1977, pp. 23-24).

There are, therefore, several formidable political and practical problems involved with the two aforementioned assumptions. Accordingly, it is likely that these will have to be either abandoned or relaxed considerably if a performance funding modification to the allocations process satisfying the "boundary conditions" discussed earlier is to emerge.

Two possible alternatives have been discussed informally and recently by members of the THEC Staff and "hypothetical" case studies embodying their basic principles have appeared in a recent publication entitled, Case Studies in Performance Funding (Bogue and Troutt, 1977). Both of the alternatives can be seen as movements away from the original assumptions in that: (1) dollars would flow to institutions on the basis of institutional willingness to "go public" on their indicators and not on the basis of indicator values per se; and (2) dollars would be appropriated both as a stimulus (before) and as a reward (after) for performance demonstration. Specifically, the following two alternatives were presented in a preliminary, general and tentative way by the THEC Project Director at recent Pilot Project Directors' meetings:

ALTERNATIVE A: Under this alternative, part of the total state appropriation for higher education (e.g., 1% - 3%) would be held by THEC in a kind of escrow account. Individual institutions would be encouraged to submit proposals for instructional improvement projects consistent with one or more of a selected number of previously designated statewide instructional goals (e.g., mission clarification, instructional improvement, identifying minimum degree standards, etc.). The criteria of evaluation and the merits of the proposal would be determined by an external panel of qualified professionals having a high degree of acceptability to all interested parties, i.e., a "blue ribbon" panel. Acceptance of a proposal would be formalized in the form of a performance contract, outlining the institutional obligation to articulate objectives clearly and to

provide public data or evidence on degree of goal attainment. That contract would also stipulate the amount of financial support THEC would commit to the project, an amount negotiated with the institution and within the limits allowed by the total budget and obligations to other institutions. One-half of the funds would be released to the institution upon acceptance of the proposal (the "before," "stimulus") while the balance would be awarded upon successful completion of the project, providing public evidence on results (the "after," "reward"). Once again, an external panel would be charged with the responsibility of determining whether or not the terms of the performance contract had been met.

ALTERNATIVE B: A second alternative would incorporate the essential features of the first, i.e., encouraging instructional improvement projects, consistent with statewide goals, with evaluation of project objectives and success by an external panel; but Alternative B would incorporate a performance funding component into the appropriations formula per se. For example, a percentage (say, 1% - 3%) of an institution's total instructional budget would be set aside and be available for institutional use only if an acceptable instructional improvement project proposal were forthcoming.

The potential and likely political and practical advantages of these two alternatives over most that might be derivable from or based upon the "dollars-on-indicators" and "reward-only-after" assumptions should be obvious. Simultaneously, however, they do represent a fundamental departure from a strict accountability performance funding notion. Perhaps the compromises inherent in these alternatives are only realistic and sensible in light of the aforementioned "boundary conditions" which stipulate that any modification of the appropriations-allocations process which is performance-based must be politically acceptable, professionally acceptable, stimulative of the development of institutional initiative in instructional improvement, and encouraging of institutional

mission clarification and diversity. In any event, and despite the fact that the final form of the performance funding recommendation to the legislature by THEC remains unspecified at the time of this writing, it seems highly likely that it will approximate one or the other of the alternatives cited above.

SUMMARY AND CONCLUSION

With the second year of the pilot effort at Tennessee Technological University nearly at an end, it is possible to say that the principal project objectives have been realized. Specifically, in the interest of improving upon the current appropriations-allocations process by introducing a complementary performance-effectiveness feature: (1) Institution-wide instructional goals have been developed; (2) Performance indicators have been identified for each of the instructional goals; (3) Data have been gathered relevant to the several performance indicators; and (4) Complementary performance-effectiveness alternatives to the current enrollment-driven formula have (or will be) considered.

Regardless of the ultimate outcome of the statewide Performance Funding Project effort, it should be clear that accomplishment of the project objectives at the institutional level may be taken as evidence of an institutional receptivity to the general notion of performance funding. To the extent that the perceptions and interpretations articulated in this paper are accurate, perhaps a partial explanation for that institutional receptivity can be found in relating the pilot project experience to certain generalizations advanced by H. Bradley Sagen in his article on academic change (Sagen, 1972).

Sagen introduces and develops a set of five primary conditions affecting the likelihood of adoption of academic innovations. These are presented below together with selected comments relating each to the project experience at Tennessee Technological University:

(1) Institutional support (norms and rewards) as reflected in

both the attitudes and support of governing boards and academic administrators.

At the state level, the Performance Funding Project has involved the governing boards of the two public systems of higher education. Both appear to have been cooperative in the project effort. The project liaison representative of this institution's State Board of Regents has been most supportive and encouraging of the pilot effort.

Similarly, the principal academic officers of Tennessee Technological University have taken a keen interest in and have been supportive of the project at both the state and local levels. The Vice President for Academic Affairs, for example, has been an active member of the Statewide Advisory Panel and has provided indispensable support to the pilot effort at the local campus level. Similarly, the academic deans of the university's five colleges have cooperated in facilitating the accomplishments of all project objectives.

(2) Compatibility of Proposed Innovation with Values of Faculty.

By and large, faculty can be seen to subscribe to the values of the larger society; such as those of freedom, democracy, individualism, rationality, practicality, efficiency, and effectiveness. The notion of performance funding, to the extent that it successfully accomodates the primary faculty concerns with academic freedom and institutional autonomy, does appear consistent with the set of values that faculty members hold.

(3) The Side Effects of Innovation. Faculty are concerned often not with direct educational benefits of innovation but how it may affect personnel welfare--promotion, tenure, salary increases, etc.

Although it is not entirely clear how performance funding is likely to affect faculty welfare, the general orientation encompassing incentives and rewards for performance may be operating as a positive factor.

(4) Communication. The employment of two-way communication and the selection of credible communicators are important steps in any change process.

A major strength of the Performance Funding Project is clearly in the area of open and continuing communications. At the state level, on-going briefings and discussions have involved members of the legislature, THEC Staff, the governing boards of the two state systems, and the administrative officers of the several institutions. A Statewide Advisory Committee has also been active, representing and reflecting these varying interests.

At Tennessee Technological University, completion of project objectives was undoubtedly made possible primarily because of the fact that faculty were given responsibility for the project's execution. Faculty involvement took a variety of forms, including directing the project, conducting and participating in a campus wide instructional goals survey, coordinating and executing the data-gathering effort, and considering and suggesting performance-effectiveness modifications to the appropriations-allocations process.

(5) Perception of present situation. Proposed innovations are rarely evaluated on an absolute basis. Rather they are evaluated against the need and possible benefits of change.

Perhaps the greatest incentive for performance funding is the promise it holds for compensating at least partially for some of the faults generally attributed by faculty to the current enrollment-driven formula. Several prominent criticisms have been summarized recently by THEC Staff (Bogue and Troutt, 1977a, pp. 2-3). These criticisms include charges that appropriations formulae:

(a) Tend to impose a leveling effect upon the quality of educational programs. Using average costs for formula instructional rates tends to have a homogenizing effect on institutional diversity. The costs of an exceptional academic offering are

averaged out by the costs of typical offerings of the same course by other state institutions.

(b) Provide no incentive for improved instructional performance. Instructional rates remain the same regardless of instructional performance. Quantity rather than quality is emphasized.

(c) Encourage a displacement of institutional goals. Obtaining more students displaces the goal of serving students. Formulae tend to become ends in themselves.

(d) Tend to utilize a linear approach which fails to recognize both economies of scale and plateaus of fixed or marginal costs. As a result, formulae are great during periods of enrollment growth but not so promising during enrollment declines.

Although our summary of one institution's pilot effort in terms of Sagen's framework suggests a generally positive and receptive climate for change, we do not wish either to understate or to minimize the importance of several serious questions and knotty problems which remain. For example, throughout the course of the pilot project at Tennessee Technological University, doubts and reservations were expressed by several administrators and faculty members. Some of the most-often-repeated included concerns regarding: (a) the potential for increasing external control and internal "meddling" by THEC and the State Board of Regents; (b) the likelihood of the development of pressures for the indicators, which are the "means" of evaluation, to become "ends" in themselves, thereby displacing the corresponding instructional goals; (c) the "uninformed" interpretation and use of performance data, i.e., that which might occur without proper understanding or appreciation of matters regarding reliability, validity and comparability; and (d) the "illegitimate" and "misleading" comparisons of performance on similar or common indicators for institutions with differential resources, missions and clientele.

Among both administrators and faculty, therefore, there continues to exist some uneasiness and skepticism regarding the fundamental issue of whether performance funding can be made compatible with the preservation of the values of academic freedom and institutional autonomy, which have been and which must continue to be the sine qua non of the higher education enterprise in a free society.

FOOTNOTES

1. Tennessee Technological University is a state-supported institution of approximately 7,500 headcount students. It is located in Cookeville, Tennessee, a city of 27,000 people. Programs of the University include offerings in five colleges: Agriculture and Home Economics, Arts and Sciences, Business Administration, Education, and Engineering. Masters programs are available in several of the departments comprising the five colleges; and a single inter-disciplinary doctoral degree in Engineering is offered.

2. Tennessee Technological University did not become involved formally with the Performance Funding Project until March of the first project year. The pilot efforts at the other ten participating institutions had been underway since September of 1976.

3. The list of all thirty-one institution-wide instructional goals and associated performance indicators for Tennessee Technological University appears in the October, 1977 End-of-Year Report. Copies are available upon request from the Pilot Project Director, Box 5166, Tennessee Technological University, Cookeville, Tennessee 38501.

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